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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,878	12/07/2001	Tommy Lindblad	19378.0019	7977
23517	7590	11/22/2004	EXAMINER	
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP			LE, TRAN Q	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/005,878

Applicant(s)

LINDBLAD, TOMMY

Examiner

Tran Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1 and 10, specification lacks detailed structure or description on how a second receiving section with a second opto-electric transceiver module that is comprised of a second receiver unit, a second opto-electric converter, a second transmitter unit, and a second electro-optical converter unit, is put in use with the first receiving section. Thus, the specification fails to enable a person skilled in the art to make and use the claimed invention as recited in claims 1 and 10.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 1-19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 10, it is not clear about the second receiving section that is adapted to receive a second opto-electric transceiver module with a second receiver unit for receiving optical signals from an optical conduction path, wherein the second receiver unit comprising a second opto-electrical converter for converting the received optical signals to electrical signals, which are adapted to be conducted to an electric circuit arrangement, and a second transmitter unit for transmitting optical signals to an optical conduction path, and wherein the second transmitter unit comprising a second electro-optical converter for converting electrical signals, received from the electric circuit arrangement.

5. Claims 1 and 10 should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101. See for example in Ex parte Lyell, 17USPQ2d 1548 (Bd. Pat. App. & Inter. 1990).

Drawings

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second opto-

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electric transceiver module in figure 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to under 37 CFR 1.83(a) because the structural elements in fig. 1 (10, 11, 12, 14, 16, 18, 20, 22, 24, 26), fig. 2 (10, 16, 18, 20, 22, 24, 26, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52), fig. 3 (10, 20, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 64, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 82, 84, 86), fig. 4 (10, 20, 22, 24, 30, 32, 34, 36, 38, 40, 42, 44, 64, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 82, 84, 86, 88, 90), and fig. 5 (10, 30, 32, 34, 36, 64, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79,

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80, 82, 84, 86, 92, 94, 96) are merely labeled with identifying numbers. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Since these elements are illustrated as blank boxes which do not correspond to well known graphical representations, applicant is required to provide suitable legends under 37 CFR 1.121(d) to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art (fig. 1, fig. 2, and specification of present application).

Regarding claims 1- 5 and 10-15, as it is understood in view of above 101 and 112 problems, the prior art of present application discloses an interface device (30, fig. 2 and specification of present application on p. 2, line 35) comprising: an electric circuit arrangement (32, fig. 2, and p. 2, line 35), a first receiving section (34, fig. 2 and p. 2, line 36) adapted to receive a first opto-electric transceiver module (24, fig. 2 and p. 2, line 37) including a first receiver unit (38, fig. 2 and p. 3, lines 2,3) for receiving optical signals from an optical conduction path (22, fig. 2 and p. 3, line 3), the first receiver unit comprising a first opto-electrical converter (40, fig. 2 and p. 3 line 5) for converting the received optical signals to electrical signals (p. 3, lines 5,6), which are adapted to be conducted to the electric circuit arrangement (p. 3, lines 6,7), and a first transmitter unit (42, fig. 2 and p. 3, line 8) for transmitting optical signals to an optical conduction path (20, fig. 2 and p. 3, line 9), the first transmitter unit comprising a first electro-optical converter (44, fig. 2 and p. 3, line 10) for converting electrical signals, received from the electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit (p. 3, lines 10-12), a second receiving section (36, fig. 2 and p. 2, line 37) adapted to receive a second opto-electric transceiver module (26, fig. 2, p. 3, lines

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1, 14) including a second receiver unit (46, fig. 2 and p. 3, line 16) for receiving optical signals from an optical conduction path (18, fig. 2 and p. 3, lines 16, 17), the second receiver unit comprising a second opto-electrical converter (48, fig. 2 and p. 3, lines 17, 18) for converting the received optical signals to electrical signals (p. 3, lines 18-19), which are adapted to be conducted to the electric circuit arrangement (p. 3, lines 19-20), and a second transmitter unit (50, fig. 2 and p. 3, line 21) for transmitting optical signals to an optical conduction path (16, fig. 2 and p. 3, lines 21-22), the second transmitter unit comprising a second electro-optical converter (52, fig. 2 and p. 3, line 23) for converting electrical signals, received from the electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit (p. 3, lines 24-26), wherein the first and second receiving sections are designed such that the first and second opto-electric transceiver modules may be plugged into the respective receiving section and unplugged therefrom (p. 2, lines 18, 19 and p. 3, lines 28-31). Prior art differs from the claimed invention in that it does not disclose an electric transceiver module arranged in the second receiving section. However, if the electrical output and input from the electrical circuit (32, fig. 2) is intended to connect to an electrical wire or circuit or component, obviously there is no need for the O/E and E/O connectors. It has been determined that omission of an element and its function where not needed is obvious. Ex Parte, 168 USPQ 375 (PTO Bd. of App. 1969); in re Karlson, 136 USPQ 184 (CCPA 1963); in re Wilson, 153 USPQ 740 (CCPA 1967). Therefore, it would have been obvious to an artisan at the time of the invention to eliminate the O/E and E/O converters of the first opto-electric transceiver (26, fig. 2) of the prior art when the output

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and input of the electrical circuit is coupled to an electrical wire, circuit or component since conversion functions are no longer needed, in order to introduce a first electric transceiver. One motivation to eliminate the E/O and O/E converters of the opto-electric transceiver is to save resources and simplify circuit arrangement. Regarding claim 10, since the first electric transceiver is connected between the electric circuit arrangement and the electrical conduction paths, hooking up the first electric transceiver module to a test equipment and testing the functionality of the interface device with the help of the test equipment can be easily done without a question. Regarding claim 11, a second electric transceiver module is obviously obtained the same way as explained above by eliminating the E/O and O/E converters of the second opto-electric transceiver, and since the second electric transceiver is connected between the electric circuit arrangement (32, fig. 2) and the conduction paths, hooking up the second electric transceiver module to a test equipment and further testing the functionality of the interface device with the help of the test equipment can be easily done by one of the ordinary skill in the art. Regarding claims 2, 3, 4, 5, 12, 13, 14, 15, whether or not an amplifier is needed is merely depend on its connection distance between components. It is notoriously known that signals degrade as they travel via transmission medium or links, therefore, it is extremely obvious to incorporate an amplifier or amplifiers at any points(s) along the transmission path in order to restore the signal strength to a desirable level. Therefore, it would have been obvious to an artisan at the time of the invention to incorporate amplifiers to the transceiver in order to restore the signal level.

Regarding claims 6 and 16, prior art discloses the first receiving section (34, fig. 2) adapted to receive the first opto-electric transceiver module and the second receiving section (36, fig. 2) adapted to receive the second opto-electric transceiver module which is similar to the first transceiver (p. 3, lines 14-15), therefore, each of the first and second receiving sections is configured to receive a transceiver module of standardized size.

Regarding claims 7 and 17, prior art discloses the first opto-electric transceiver module (24, fig. 1) being connected to the fiberoptic communication network (14, fig. 1) via a multiplexer/demultiplexer (11, fig. 1). Therefore, prior art also teaches that the interface device is configured such that, when it is to be used between the subscriber unit and the fiberoptic communication network, the first opto-electric transceiver module is to be attached to the first receiving section and to be connected to the fiberoptic communication network via a multiplexer/demultiplexer (fig. 1 and fig. 2).

Regarding claims 8 and 18, prior art teaches the interface device, together with the attached first opto-electric transceiver module and the attached first electric transceiver module, is arranged to adapt the signals from the subscriber unit before transmitting the signals to the multiplexer/demultiplexer, and also to adapt signals from the multiplexer/demultiplexer before they are transmitted to the subscriber unit (p. 3, lines 33-36 and p. 4, lines 1-2). Therefore, it is inherently understood that interface device is configured such that, when it is to be used in a fiberoptic communication network, the electric circuit arrangement, together with transceiver modules attached to the first and second receiving sections, is arranged to be able to adapt signals from the

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subscriber unit before transmitting the signals to the multiplexer/demultiplexer, and also to adapt signals from the multiplexer/demultiplexer before they are transmitted to the subscriber unit (fig. 1 and fig. 2).

Regarding claims 9 and 19, prior art teaches that the interface device includes a circuit board, on which the electric circuit arrangement (32, fig. 2), the first receiving section and the second receiving section are arranged (p. 2, lines 18-20 and fig. 2).

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Williams et al. (US Patent No: 5,880,864) is cited to show an advanced optical fiber communications network with an intelligent interface device in the subscriber's premises providing a connection to the optical fiber and performs two-way wavelength division multiplexing and demultiplexing as well as any necessary signal format conversions.

Fussfanger (US Patent No: 5,202,780) is cited to show an optical communication system for transmitting subscriber-assigned information signals in two directions between a center and a plurality of subscribers, wherein for each of a plurality of groups of subscribers, a remote distribution unit is provided in the vicinity of the subscribers.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran Q. Le whose telephone number is (571)272-2046. The examiner can normally be reached on 8am-5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TQL


M. R. SEDIGHIAN
PRIMARY EXAMINER